



Age & Gender as Moderator of Online Purchase Intention: A Comparative Analysis

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Abstract

The rapid growth of e-commerce has significantly influenced consumer behavior, making it essential to understand the factors shaping online purchase intentions. This paper explores demographic factors which affecting consumer online purchase intention, using Exploratory and Confirmatory Factor Analysis. The research examines respondents across six administrative divisions of Haryana to analyze the impact of factors such as website design, price offerings, trust, security & privacy, delivery, innovation. The Principal Component Analysis (PCA) with Varimax rotation identified six key factors, followed by Age and Gender. The results highlight the importance of these variables in shaping consumer trust and decision-making in online shopping with respect to demographic factors i.e. Age and Gender. The paper provides important insights for businesses, policymakers, and marketers to enhance consumer experiences, strengthen security measures, and optimize pricing strategies to boost online shopping adoption. Future research can extend the analysis to other demographics and market conditions.

Keywords: Online Shopping, Purchase Intention, Age, Gender, E-Commerce

1. Introduction

The Internet is growing rapidly in Indonesia which is supported by the development of a demographic bonus every year from the younger generation. The average productive age, the Internet, and technology tend to be part of the joints of life that cannot be separated and affect attitudes, mentality, and ethics because their way of thinking only uses various information on the Internet. According to APJII data, the number of internet users in Indonesia in early 2021 had been 73.7% of Indonesia's population of 274.9 million. The number of internet users in Indonesia is the 4th largest in the world after America, India, and China. According to Wikipedia Indonesia that Generation Z is the generation born between 1998 and 2010 and some think that from 1996-2012 early, there tend to be still different opinions on when Generation Z appeared, but most opinions say Generation Z had been born in 1998-2010. Generation Z is a transitional generation from generation Y, namely the descendants of generation X and including parents from generation Y. The Internet is widely used by people aged 15 to 19 years. A study conducted by Hidvégi and Kelemen-Erdős

on Hungary's Generation Z revealed that nearly all participants accessed the Internet daily, a majority relied on it for purchase-related information, and about one-third expressed enjoyment in making online purchases. Social media affects Generation Z in terms of looking for brands and buying with efforts to see advertisements in online promotional media. For this reason, online media can increase Generation Z's interest in brands and purchases. The consumer engagement is consistent, often marketers create content that indirectly contributes to its brand equity or increases its sales, but is valuable to consumers. Content Marketing that is good and contains interesting information tends to be more likely to be in demand by consumers. Content marketing receives a lot of customer attention, as well as the goal of improving company performance. In determining a product, prospective customers tend to be more likely to consume it and learn about it.

1.1. Consumer Behavior

Consumer behavior is the study of how individual customers, groups or organizations select, buy, use, and dispose ideas, goods, and services to satisfy their

needs and wants. It refers to the actions of the consumers in the marketplace and the underlying motives for those actions. Currently, numerous digital shopping platforms, marketplaces and websites tend to be in the service and the sphere is booming increasingly. Although the appeal of the physical stores is still quite apparent and according to market specialists this is expected to last for an even longer period, the option of shopping online is expected to become more convenient and handier as people tend to be becoming busier with day-to-day activities and everyone wants to avoid hassle of tolerating time-losses on the way to the market. Ordering from home with a preferable payment method and get them at hand at prefixed time is becoming a major reason to lean on to the digital shopping approach. Customer satisfaction is eminent topic in several fields like marketing, consumer research, and psychology. The satisfactions a feeling which is a consequence of the assessing process which notifies what has reportedly been received against what had been expected, including the purchase decision and needs associated with the purchase. Internet has reportedly been constantly gaining importance nowadays [1-4].

1.2. Literature Review

Since the late 1990s, online shopping has taken off as an increasing number of consumers purchase increasingly diversified products on the Internet. Given that how to attract and retain consumers is critical to the success of online retailers, research on the antecedents of consumer acceptance of online shopping has attracted widespread attention. There has yet to be a holistic view of online shopping acceptance from the perspective of consumers. The paper attempts to identify the determinants of online purchase intentions of different demographics factors in Indian context. Based on extensive literature review, factors affecting online purchase intentions, antecedents of service quality and consumer attitudes were identified and a structured-non-disguised questionnaire was prepared. Empirical studies have shown that consumer behavior in online environments is also influenced by situational factors such as product type, cultural context, and past experiences. For instance, price sensitivity may

dominate when purchasing commodities, while trust and brand reputation may carry more weight in luxury or high-involvement purchases. Similarly, while younger consumers may prioritize innovative features and interactivity, older consumers may be more concerned with security and privacy. This diversity of findings underscores the need for an integrated approach that considers the interplay between different consumer factors rather than treating them in isolation [5-10].

1.3. Statement of Research Problem

Examining how online purchasing affects customer satisfaction is the study's research problem. According to a research gap, consumers are not using online shopping to increase their level of satisfaction. However, the material that is currently available highlights how the situation has drastically transformed (Ho and Wu, 1999; Huang et al., 2020). Customers were now aware of the need for online buying on their own. In order to get a competitive edge, consumers must now determine the elements that influence customer engagement. Therefore, the goal of this study is to investigate the Demographic factors that influences how online shopping is perceived in terms of consumer satisfaction. Therefore, the goal of the study is to identify the demographic factors that affect online shoppers' satisfaction and investigate the relationship between online shopping and customer satisfaction with demographics factors. Following the evaluation of these key factors, the study "Online Purchase Intentions across Consumer Demographics: A Comparative Study" was chosen for the current investigation [11].

1.4. Methodology & Objective of The Study

To investigate the moderating role of consumer characteristics on the relationship between online shopping and consumer delight. The present study is Exploratory-cum-Descriptive in nature as its endeavors to assess the relationship between specific factors. The study was limited to the state of Haryana, taking the six administrative division i.e. Ambala, Faridabad, Gurugram, Hisar, Rohtak and Karnal were taken as a part of sample. Various pre-purchase, on purchase and post purchase factors were taken into consideration for study. Data was collected with the

help of structured questionnaire provided through google doc., Facebook and e-mails. The study included various categories of products and services which includes garments, footwear, accessories, electronic goods, tickets (movie/railways/hotels/flights), books/Magazines/Journals, home furnishing, Banking, Gifts/ Greetings and Flowers, others available on various websites. The sampling method used for this study was Non-Probability Sampling. Snowball and Purposivesampling method were used to draw the sample from population. Data was collected from 411 Respondent across the different administrative units.

H1: To investigate the moderating role of consumer characteristics i.e. Age & Gender with online shopping.

H1: Gender had a significant impact on the determinants of consumer delight.

H1a: - Gender had a significant impact on online shopping regarding website design.

H1b: - Gender had a significant impact on online shopping regarding Trust.

H1c: - Gender had a significant impact on online shopping regarding Security & Privacy.

H1d: - Gender had a significant impact on online shopping regarding Delivery.

H1e: - Gender had a significant impact on online shopping regarding Price.

H1f: - Gender had a significant impact on online shopping regarding Innovation.

Age had a significant impact on the determinants of consumer delight.

H1a: - Age had a significant impact on online shopping regarding website design.

H1b: - Age had a significant impact on online shopping regarding Trust.

H1c: - Age had a significant impact on online shopping regarding Security & Privacy.

H1d: - Age had a significant impact on online shopping regarding Delivery.

H1e: - Age had a significant impact on online shopping regarding Price.

H1f: - Age had a significant impact on online shopping regarding Innovation.

1.5. Profiling of Respondents

Six administrative divisions of Haryana—Ambala, Hisar, Rohtak, Gurugram, Karnal, and Faridabad—taken into study with aims to gauge customer attitudes regarding website design, Price offering Security & privacy, Delivery, Purchase Decision, Trust, Innovation and Digital Marketing in online shopping. A data of 452 was collected for the study but after excluding 411 was found suitable for further analysis. After analysing the 452 data that were gathered from the sampling units, 411 were determined to be suitable for further investigation. given that 411 was the calculated sample size. The respondents' internet shopping profiles are shown in Table 1. Respondents are analyse on the basis of Age, Income, Gender, Occupation, Marital status, Education, Administrative division & Region. The table shows that the largest percentage of responders (148) are between the ages of 18 and 28, which signify that respondent are quite young followed by those between the ages of 39 and 48 (87). The occupations in the table indicate that there are more students (127) than professionals (80) and service personnel (91). The remaining respondents are from different professions. It is evident from table 1 that fewer respondents in rural areas than in urban areas shop online. It also shows that 232 of the 411 responders are men and the remaining 179 are women. Since 186 of the respondents are postgraduates and 139 are graduates, the table 1 demonstrated that all of the respondents have a high level of education, shown in Figure 1 [12-20].

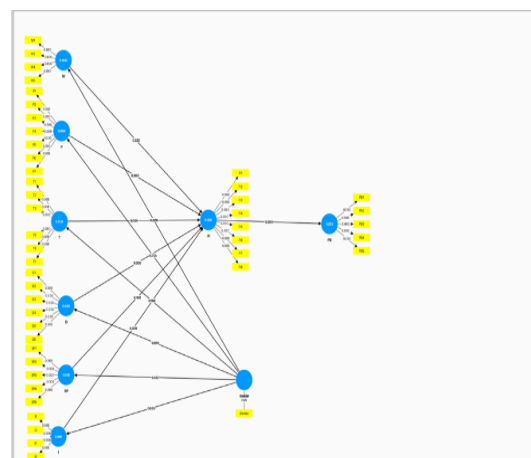


Figure 1 Source: PLS-SEM

Table 1 Profiling of Respondents

Particulars	Demographics	Frequency	Percentage
Age	18-28	148	36.0
	29-38	75	18.2
	39-48	87	21.2
	49-58	49	11.9
	Above 58	52	12.7
Gender	Male	232	56.4
	Female	179	43.6
Source: Primary Data			

1.6. Data Analysis & Finding

Table 2 Gender

Hypothesis	path	Sample mean (M)	Standard Deviation (STDVE)	T Statics (IO/STDEV)	P Value	Decision
Gender FI	Gender >Website design	0.022	0.106	0.228	0.820	H3a
Gender FI	Gender >Trust	0.133	0.099	1.328	0.184	H3b
Gender FI	Gender > Security & Privacy	0.151	0.099	1.506	0.132	H3c
Gender FI	Gender > Delivery	0.104	0.100	1.046	0.296	H3d
Gender FI	Gender > Price	0.031	0.101	0.313	0.754	H3e
Gender FI	Gender > Innovation	-0.025	0.105	0.227	0.820	H3f

Source: Primary Data. significant at 5% level

The results indicate that none of the examined factors show a statistically significant influence of gender, as all p-values exceed the 0.05 threshold. Specifically, gender differences in perceptions of website design (M = 0.022, p = 0.820), trust (M = 0.133, p = 0.184), security & privacy (M = 0.151, p = 0.132), delivery (M = 0.104, p = 0.296), price (M = 0.031, p = 0.754), and innovation (M = -0.025, p = 0.820) are not

significant. This suggests that gender does not play a notable moderating role in shaping consumer delight in online shopping experiences, shown in Table 2.

H2: Age had a significant impact on the determinants of consumer delight.

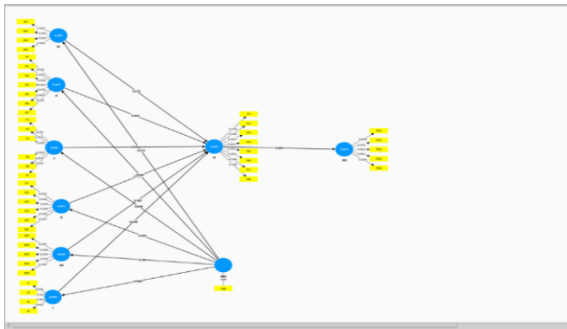


Figure 2 Source: - PLS-SEM

Consumer delight is not a one-size-fits-all phenomenon. Given hypothesis posits that a consumer's age plays a significant mediating role, directly influencing which factors, such as trust, innovation, or price, are most effective in creating a delightful experience, shown in Figure 2 [21-29].

Table 3 Primary Data.

Hypothesis	path	Sample mean (M)	Standard Deviation (STDVE)	T Statics (IO/STDEV)	P Value	Decision
Age FI	Age >Website design	0.047	0.052	0.890	0.374	H3a
Age FI	Age >Trust	0.153	0.040	3.803	0.000	H3b*
Age FI	Age > Security & Privacy	0.068	0.047	1.457	0.145	H3c
Age FI	Age > Delivery	0.114	0.042	2.757	0.006	H3d*
Age FI	Age > Price	0.164	0.042	3.947	0.000	H3e*
Age FI	Age > Innovation	-0.002	0.048	0.021	0.983	H3f

Source: Primary Data Significant at 5% Level

The given data analyses the moderating role of age in the relationship between online shopping and consumer delight. The results show that age significantly impacts consumers' perceptions of trust ($M = 0.153$, $p = 0.000$), delivery ($M = 0.114$, $p = 0.006$), and price ($M = 0.164$, $p = 0.000$). These p-values are below the 0.05 threshold, indicating strong statistical significance. This suggests that consumers of different age groups perceive these factors differently, making them important contributors to consumer delight in online shopping. On the other

hand, website design ($M = 0.047$, $p = 0.374$), security & privacy ($M = 0.068$, $p = 0.145$), and innovation ($M = -0.002$, $p = 0.983$) do not show significant variations based on age. Since their p-values exceed 0.05, it can be inferred that these factors are perceived similarly across different age groups. In particular, innovation has an almost negligible effect ($M = -0.002$, $p = 0.983$), suggesting that consumer delight related to innovation is independent of age. This objective explored how consumer characteristics such as **gender**, **age** moderated the relationship

between online shopping determinants (website design, trust, security & privacy, delivery, price, and innovation) and **consumer delight**. Using **PLS-SEM**, the moderating effects were assessed, and the results are presented below. In terms of gender, the results clearly indicate that none of the determinants—website design, trust, security and privacy, delivery, price, or innovation—are significantly influenced by gender, as all p-values exceed 0.05. This demonstrates that male and female consumers largely share similar perceptions and expectations regarding online shopping experiences, suggesting that gender is not a meaningful differentiator in shaping consumer delight. The analysis of age as a moderating factor reveals stronger variations. Age significantly influences perceptions of trust ($M = 0.153$, $p = 0.000$), delivery ($M = 0.114$, $p = 0.006$), and price ($M = 0.164$, $p = 0.000$). These results suggest that younger and older consumers may perceive the reliability of online platforms, the efficiency of delivery systems, and the importance of price differently. For instance, younger consumers might be more price-sensitive, while older consumers could value delivery reliability more. On the other hand, age does not significantly moderate perceptions of website design, security and privacy, or innovation, meaning these aspects are viewed consistently across different age groups.

1.7. Finding & Result

In summary, the findings underscore that gender do not significantly moderate consumer perceptions, other such as age play an important role in shaping how online shopping determinants contribute to consumer delight. Trust, delivery, price, and innovation emerge as the most sensitive to these moderating factors, highlighting the need for customized strategies in building trust, ensuring competitive pricing, improving delivery systems, and tailoring innovations to different consumer segments. Overall, the findings align with previous research, emphasizing the importance of these factors in consumer perception. Businesses must continually improve these aspects to enhance customer satisfaction, build long-term trust, and stay competitive in the rapidly evolving e-commerce landscape. Future research could explore emerging

technologies and additional demographic factors influencing online shopping behavior, shown in Table 3.

1.8. Limitations & Further Research

While this study provides valuable insights into the factors influencing consumer perception of online shopping, it has certain limitations that should be addressed in future research. Firstly, the study is limited to six administrative divisions of Haryana, which may restrict the generalizability of findings to a broader demographic or international context. Future research could expand the geographical scope to include diverse regions and consumer segments. Secondly, the study primarily focuses on website design, security & privacy, price, delivery, trust, and innovation as key factors, but other variables such as customer service quality, social influence, brand reputation, and psychological factors could also impact consumer perception. Future studies could incorporate these dimensions to provide a more comprehensive analysis.

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